

ABSTRACT OF THE INVENTION
RUNTIME REPAIRABLE PROCESSOR

A self repairable processor that provides a reliable computing result without increasing the footprint of the on-chip devices. The processor has a plurality of data registers connected to two identical functional units, where only one of the functional units is enabled for computing, the two functional units being placed in a chip area defined at most by data paths needed for one functional unit. When an error condition is detected in the active functional unit, the processor disables the functional unit with an error condition and enables the duplicate functional unit.